JOURNAL

OF AMERICAN INSURANCE

APRIL 1960 Vol. 36—No. 4

Our Mighty Implements of Abundance

Secrets of a Fake-Claim Sleuth

A Look Ahead in Air Safety

New Shapes in Prairie Architecture

Insurance Balm for Atomic Jitters

Requiem for Book-Burning

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1 *Tools for the Nation's Bread*

5 *I'm Fed Up With Phony Claims*

9 *'Hades' Harnessed for Power*

11 *How Safe Can We Make Our Airways?*

14 *Tighter Reins on Radiation*

16 *Introducing: Our 51 U. S. Insurance Departments*

18 *Landmark on the Prairies*

21 *From Our Annals—Thomas Jefferson*

22 *This Changing Motorized World*

26 *Atomic Energy's Super Insurance*

28 *Charlie II Slept Here*

30 *No Book-Burning Here*

33 *Close-Ups of Our Commissioners—Holmes*

FRONT COVER—*Jefferson's Monticello*
The Thomas Jefferson Memorial Foundation

BACK COVER—*Jefferson Memorial, Washington, D. C.*
Abbie Rowe, Courtesy National Park Service

OUR COVERS

AS A MODEL of home ownership and maintenance, Thomas Jefferson's Monticello (front cover) has never been surpassed. For it is acknowledged that no man—architect or artisan—ever built himself a better home or put more of his own personality into it than did Jefferson at Monticello. Significantly, he had it protected with mutual insurance under a policy of the Mutual Assurance Society of Virginia, organized in 1794 and still active.

Jefferson was 23 when he selected the summit-site for Monticello in 1766. He died there July 4, 1826, after spending 60 years of his life enduing Monticello with his personal tastes and philosophy.

Monticello's spirit and style are reflected in the Thomas Jefferson Memorial on the Tidal Basin in Washington, D. C. Jefferson's statue standing inside (back cover) is by the American sculptor, Rudulph Evans. The memorial monument itself was completed in 1943 as adapted from the plans of John Russell Pope. As if speaking for today, Jefferson once wrote, "Peace is our passion." ⊙

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NEWELL R. JOHNSON, *General Manager*
FREDERICK J. KEILHOLZ, *Editor*
L. A. FITZGERALD, *Assistant Editor*
RICHARD L. BRADLEY
PEG O'HARA
DON SEGRAVES

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Equipment dealers, insurance-protected in a vast business, assure food and fiber.

TOOLS FOR THE NATION'S BREAD

NEVER BEFORE IN HISTORY have so few fed so many.

Americans now enjoy the most bounteous food supply in the world—with less than 12 per cent of the population needed to grow it. By contrast, 45 per cent of Russia's manpower is devoted to farming, and in Red China it's 85 per cent.

This is a miracle of machines, as well as of men and of science, with 18,000 farm implement dealers "off stage" putting the necessary tools into the hands of farmers. Temporarily, it has a nation of 177 million people worrying more about the problems of abundance than about famine. But it bodes well for mealtime in 1975, when America will need an estimated 25 per cent more food to feed a probable 240 million.

The tools that have made such abundance possible are something of a bumper crop in themselves. There are now nearly 5 million tractors in use on U. S. farms, plus 3 million motor trucks, well over 1 million grain combines, 760,000 corn pickers and 775,000 milking machines.

Output per farm worker has increased 83 per cent since 1940 with the aid of tractors and other power equipment supplied by the nation's 18,000 implement dealers.

International Harvester Company

Tools for the Nation's Bread

Since World War II alone, equipment dealers have sold farmers more than $26 billion worth of machinery to make the hired hand's labor easier and more efficient. As a result, each farmer can now produce enough food and fiber to support more than 24 persons. Just 15 years ago, the average farmer could supply only 14 persons—and his great-grandfather had his hands full to feed four at the time of the Civil War.

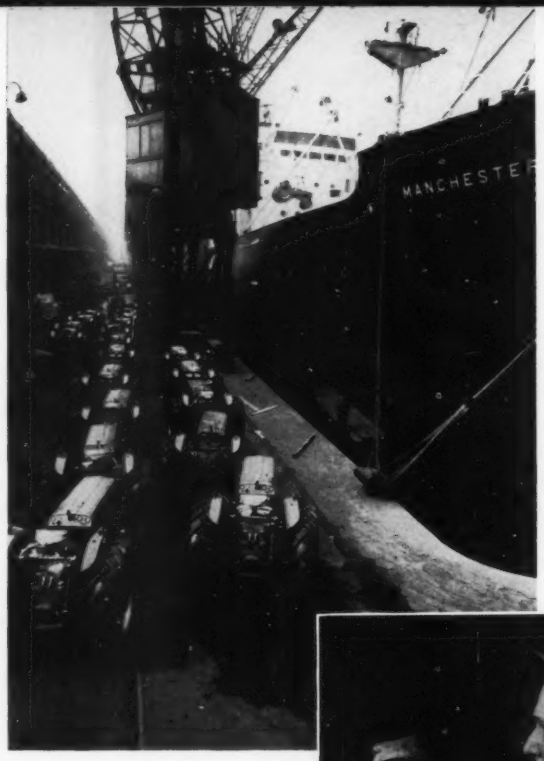
Farm implements became big business with the invention of the gasoline tractor around the turn of the century—the same period that saw the beginning of several mutual insurance companies to serve the special needs of farm equipment dealers. Between 1899 and 1916, hardware and implement dealers in Minnesota, Wisconsin, Iowa, Ohio, Nebraska, the Carolinas and Texas founded mutual companies to provide insurance protection at cost for their buildings and inventory.

In the half-century since then, this partnership has become nationwide as the sale of farm equipment has grown into a $3 billion a year business. The willingness of dealers to take risks with that much money can be credited, in large part, to the protective role of insurance at all levels of their business operations.

The average implement dealer handles more than $250,000 worth of new and used farm equipment, repair parts and services each year, according to the National Retail Farm Equipment Association. In addition, his buildings, tools and customers' machinery taken in for repair can easily double his exposure to hazards that may cause financial loss.

From the beginning, mutual insurance has provided implement dealers with protection against the major hazards of fire, lightning, windstorm and explosion. Some other risks have gradually disappeared over the years, and new ones have taken their place: Runaway horses no longer complicate the delivery of a brand new threshing rig, but a self-propelled combine can still create a sizable traffic hazard en route to a farmer's grain field.

As machinery has grown more powerful and complicated, the risk of causing property dam-



↑

Small diesels, built in Britain by an American firm, are now in use on U.S. farms. They were covered in transit by one of world's oldest forms of insurance, a marine cargo policy against shipwreck, fire and other hazards of ships at sea.

→

Fast, efficient repair service is a must for today's mechanized farming. Dealers now insure valuable equipment left for repair against fire, storm, theft, collision.

Allis-Chalmers Manufacturing Company

←
New implements often begin with a farmer and a problem. Dealer Ray Varland discusses a five-row corn picker assembled by Jim Holderman, Morris, Illinois, to harvest his bumper crop. Such innovations often turn up later as standard equipment.

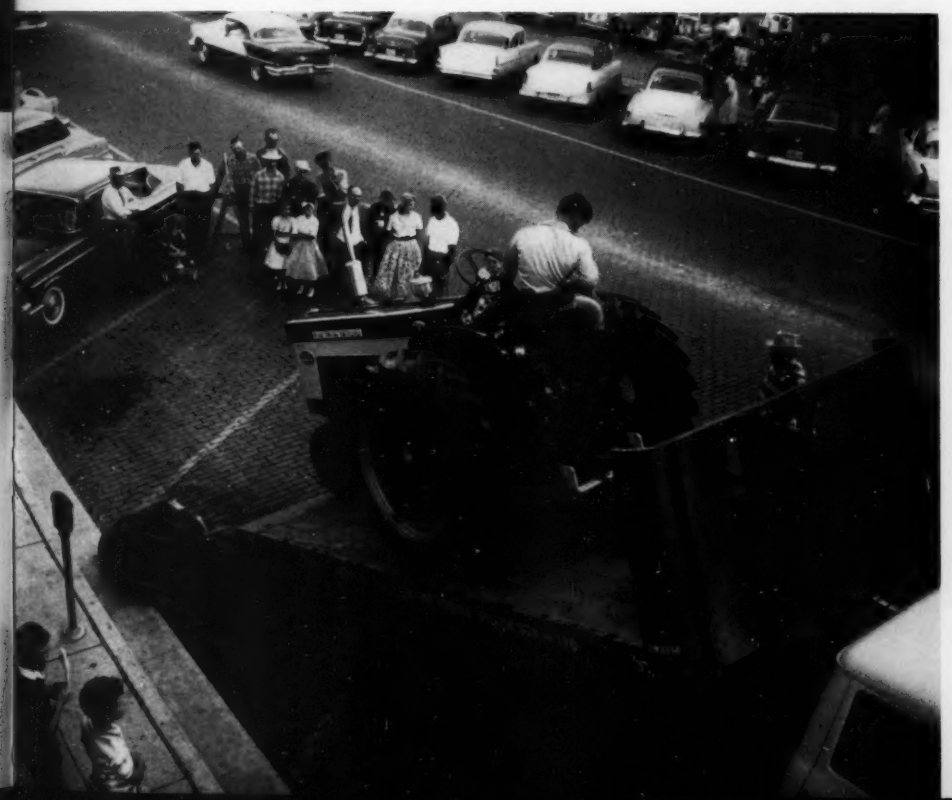
↑
Inventories build up in Spring, as dealers and farmers prepare for their busiest season. Average dealer handles more than $250,000 worth of equipment and parts a year, protects his investment with multiple peril insurance on buildings, stock.

Sneak preview of a new model tractor created quite a stir in downtown Harvard, Illinois. Youngsters crawled all over it, curious farmers tried out the motor. Had a mishap occurred, damage would have been fully covered by liability insurance.

↓ *International Harvester Photos*

Mutual insurance companies provide specialized engineering services to help farm implement dealers prevent losses. Fire-proof construction, sprinklers, and safe storage of flammable liquids all reduce the risk of fire—and cut insurance rates.

↓



age and crippling injuries has made public liability insurance a necessity for dealers in farm equipment. Most of them also insure all equipment in their possession against theft, fire, collision and other physical hazards. Broad coverage can be obtained in at least two recommended ways:

In most states, dealers can buy a multiple peril policy covering all merchandise wherever it may be located, with the exception of autos and trucks. The latter, whether offered for sale or used in the business, can be covered under a separate motor vehicle policy.

Implements Are Covered in Field and Shop

Approximately the same coverages can be obtained piecemeal by purchasing fire, extended coverage and vandalism insurance on all contents except tractors, tractor-drawn implements, autos and trucks. The motor vehicle policy can be endorsed to cover all of these while on the premises, and a hardware and implement dealers' floater can be used to insure them while in transit and away from the premises.

Since most dealers spend a great deal of time demonstrating their tractors and implements at the fields of sales prospects, this insurance is a valuable thing to have. The hardware and implement dealers' floater also can be used to protect customers' equipment left with the dealer for repair.

Changing times have made popular another type of coverage that applies after the goods have been sold. Known as an installment sales floater, it is written to protect both the dealer and the farmer when machinery is sold on credit—as much of it has been in the past 15 years. If the farmer's barn burns down on his new tractor and hay baler before they are fully paid for, this insurance covers the remainder of the debt.

Like other businessmen, implement dealers need the standard coverages on their buildings and employees: Workmen's compensation, group accident and health, fire and extended coverage, burglary and robbery, and business interruption protection to protect the company's profits in the event of a crippling loss.

Whatever kind of coverages they buy, dealers get considerably more than a promise to pay for losses. Mutual insurance companies maintain staffs of engineers to work out safety procedures for paint spraying, welding, hoisting heavy equipment, storing flammable materials and for other special problems that create hazards for the dealer's property and employees.

New problems are certain to arise in the near future as a whole new generation of machines comes into being to carry the farm revolution still farther. Chores around the farmstead are still on the threshold of a push-button era that can cut in half the 4 million man-hours spent on them each year.

Some farmers have already mechanized cattle and pig feeding with electric mixers that blend corn, protein, vitamins, antibiotics and other additives in just the right proportion. A conveyer then transports the mixture to automatic feeders—and the chores are done for the day.

In the field, power equipment has cut the average amount of labor required to grow a bushel of corn to about 20 minutes. The best farmers, making full use of mechanical equipment, fertilizers and chemical protectants, can produce such high yields that labor is cut to five minutes per bushel.

Such efficiency has accelerated the trend toward fewer farmers on larger farms. One leading farm publication, *Successful Farming,* predicts that by 1975, 90 per cent of the nation's food supply will be grown by fewer than 1.5 million commercial farmers. Each will require capital investments of $200,000 and up for machines, buildings and land, and will grow crops to order for the nation's dinner tables.

More of Everything to Eat Needed by 1975

Their job will be formidable. With 8,000 new citizens being born every day, the U. S. Department of Agriculture estimates we will need 58 per cent more beef and veal, 41 per cent more pork, 40 per cent more milk, 35 per cent more eggs and 18 per cent more poultry than was produced last year.

To meet this challenge, farmers will continue to rely on the nation's implement dealers for more efficient tools and services. Both dealers and farmers in turn can rely on mutual insurance to help them do their jobs with greater safety and financial assurance.

Working together, they can see to it that when the stork arrives with 1975's millions, an ample supply of food and fiber will be on hand to insure the future against hunger and want. ⊙

In the rising tide of padded and fraudulent claims, the public is the loser along with insurers.

I'M FED UP WITH PHONY CLAIMS

BY A VETERAN INSURANCE ADJUSTER *As told to the Journal of American Insurance*

MY BEST-REMEMBERED faker in 36 years of dealing with insurance claims of all kinds is the man who shortly afterward went insane and killed himself by cutting his throat.

You might say he lost the hard way. But sooner or later all these fakers and filers of fraudulent claims lose in one way or another. They lose to their conscience, as the suicide did. Or they lose the respect and confidence of their honest friends. And more often than not they lose to the courts and the insurance companies, for the companies are wiser to the ways of the fraudulent claim than the unscrupulous policyholder may think they are.

Meanwhile, the long-suffering and innocent losers are the insurance companies and all honest policyholders who must take the rap on fraudulent claims in the form of undue losses and higher premiums. Instances of featherbedding and fraud have become commonplace in my daily work. People will do almost anything to persuade us to hand out money for faked or imaginary claims. Furthermore, the courts have done very little to discourage the practice. Our public morals seem to have hit the skids with jet speed.

The sickening case of the suicide is only one of many I am going to tell you about. I am consenting to take the readers of the *Journal* into my confidence because I am a member of the American public first and an insurance adjuster second. It is time we did something about the gyps, the fakers and the otherwise "respectable" people who are running up the cost of liability insurance.

In my area the cost for basic limits on a car driven by a male under 25 years of age is about $300, without collision coverage. In some states insurance is compulsory and the cost is inescapable. For one thing, the high cost of automobile insurance directly affects the living habits of young men who are trying to get a start in life. I realize that many of these young men have brought about these high rates because of their careless driving. However, the good drivers have to suffer with the bad. My contention is that the rates would be much lower if those who are injured, either in property or in person, were compensated honestly and not for faked or imaginary losses.

That contention is backed up by case after case I have seen since I started in this work in 1924. For years now I have handled an average of about 30 claims each month. The amounts involved run all the way from $1 to $35,000. Most of these claims were the result of auto accidents, but in recent years there has been a significant increase in residence and mercantile liability claims. The advent of the so-called package policy—homeowners—has increased this type of claim.

My first experience with fraudulent claims occurred about 25 years ago. Since then the cupidity of these fakers and featherbedders hasn't changed much. And as is still sometimes the case, these two couples of young people piled up quite a "take" in claims before they were caught.

They bought policies in several companies and subsequently faked a number of auto accidents. Their "props" were a supply of hypodermic needles and acid. One of the couples would rush into a claim office and report that their car had gone out of control, struck the other car, inflicting painful cuts about the face and hands.

At the scene of the "accident" the other couple would be found with wounds, self-inflicted, of course. But in at least one case they were examined by a physician who verified the injuries. Quick settlements would be agreed to, whereupon the four operators would depart for

another city where they would pull the same fake on one of their other companies. Before they were caught, they had defrauded several companies out of several thousand dollars. They were sentenced to serve a number of years —how many, I have forgotten—but that did not repay the loss to the insuring companies and to the honest policyholders.

By far my most unusual fraudulent claim originated in my territory long before I came on the scene and involved a compensation claim under the state workmen's compensation act. An employer's accident report form was received showing that a certain employee was hurt in the course of his job. One or more fingers were crushed. A medical report was received indicating that a severe infection followed and that 10 days later the man died in a hospital, leaving a widow and several children.

Subsequently, the widow appeared with an attorney in compensation court and swore to the usual questions under oath. She was awarded weekly benefits for the rest of her life or for so long as she did not remarry. For the many years I checked on her, her widow status remained unchanged.

She would have gone on collecting her widow's payments for the rest of her life if I hadn't met up on the train one day with a longtime friend and one of the foremost citizens of the county. During our reminiscence about people we knew, he recalled the widow and her husband's death some 20 years ago. It was common gossip, he said, that her husband had injured his hand at his own home and not on the job. This I had to investigate, and I pressed my informer for proof.

Among the several clues he gave me was the name of the brother of the deceased man. At first he hesitated to talk to me because he knew what the consequences would be. But he was nearly 75 years old, in poor health, and must have been moved to clear his conscience before going before his Maker. He confessed that he himself had taken his brother to the hospital after the accident and that his brother had told him exactly how the accident had happened. The hand had been mashed, not on the job, but at home while the brother was letting a heavy barrel of cider down from a wagon into the cellar.

When I confronted the widow, who was along in years by that time, she did not deny the facts I had uncovered. Her only defense was, "I never asked them to give me any money. If you don't think I deserve it, why don't you stop it?" Which is what we did. She was cited to appear before a referee to show cause why compensation should not be stopped, but she never appeared. Here was a case which showed clear collusion between the employer and the claimant. I am not sure whether the doctor, the hospital and the attorney may not have been involved, too.

Whiplash "Injuries" Overworked as Fakes

Today we are seeing a rash of fraudulent claims involving the so-called whiplash injuries. Two notorious ones have been in my territory. Both have occurred within the past three years.

Claimant in the first one was a woman barber, with her husband, who was stopped at a red light in heavy traffic. A following car, driven by an elderly man accompanied by his wife, could not be stopped before it had rammed into the rear bumper of the woman's car. A broken tail light lens was the only damage to the car ahead. The barber's husband jumped out, ran back to the old man whose car had done the hitting and inquired if he had plenty of car insurance, adding: "My wife has a whiplash injury and can collect plenty from this."

She did, too, and there wasn't much we could do about it. She went under the care of the leading orthopedic doctor in the area. He applied a so-called "Queen Anne" collar to her neck. I performed a dozen checkups myself during the next six months, and others were doing the same. She wore that collar all the time she was cutting hair, but she lost very little time from the accident until the date for trial.

Settlement on the case was made in the judge's chamber. The good woman waited until the check arrived, then took off the collar, and I have not seen it since.

Five women riding in one car were involved in the other case. All claimed whiplash injuries and had the foremost negligence attorney in

the county to handle their cases, fortified with the necessary medical evidence. Their cases were settled before trial. Whereupon they crossed the street, with their attorney, hit for the nearest bar and began ordering drinks, still wearing the usual high supporting collars. The "cure" worked, the collars soon came off and were tossed around in a high jinks of laughing and joking. The reported settlement for all five was $21,000.

Unfortunately for honest policyholders and the insurance companies, there is no sure system for spotting phonies. The country is well supplied with unprincipled people who know how to fake claims. There also is a good supply of doctors who will go along with anything the claimant or his lawyer demands.

I actually heard this case in compensation court: The referee asked the claimant if he was Mr. _____. The man said he was. Then the referee asked him if he were claiming that he was injured in an accident. The man answered that he was not. "Then," said the referee, "why are you here?" To which the man replied, "My doctor says I was hurt in an accident."

Doctors Are Prostituted in Claim Duplicity

There are so many claim-minded people around my area that it has become common for a person who has had a property damage auto accident to be asked by a neighbor or friend, "Aren't you even going to see a doctor?" Note the neighbor does not ask, "Were you hurt?" It is taken for granted that all anyone has to do to get paid for an injury claim is to see a doctor.

Even when these phony claims can be spotted, they are still a financial injustice to the insurance companies and other policyholders because of the time and expense in running them down. Some years ago a man got a large verdict against us in my part of the country. It was in the range of $20,000. Suspecting the dishonesty of the claim, we filed notice of appeal. During the next few months we had him shadowed and found that he was spending the summer at a mountain resort, whereupon one of our best men registered at the resort as another guest. During the next two weeks our man took pictures of the man who was supposed to be a total permanent disability victim because of a back injury. But the pictures showed him carrying full pails of water in both hands and high diving into the swimming pool. When this evidence was presented to the appellate court, the case was dismissed.

Sometimes exposing a false claim benefits not only the insuring company and its other policyholders but also the false claimant, as well. There was the case of the man who came into our area from a metropolitan center ostensibly to retire on his insurance. Possessing life insurance with permanent disability provisions, he had been told by his doctors to get out of his store and into the country. They certified to a condition that ordinarily is not a permanent disability. But we began to pay him monthly benefits, which were large under the terms of his policy.

After the first year, I began to shadow him and at the end of three years had found him doing hard, laborious work on several occasions. We stopped paying benefits. He sued.

During the course of the trial he became incensed when questioned about what I had seen him doing. Furthermore, his lawyer was something less than happy over the turn of events. A recess was called and the case was settled for a small amount, considering our lifetime exposure.

Unwittingly, this man had cheated himself of his right to benefits in his old age because he had to surrender his total disability clause. But happily for him, our exposure of the fraud was a blessing in disguise for him. When he found that his claim was terminated and that he could never file another, he became very active and opened another profitable business which has brought him in far more money than he could have collected from his faked claim against us.

Not all the culprits in the fraudulent claim business do that well by themselves, their insuring companies and their policyholding friends. A high percentage of all people feel that insurance companies are fair game for the biggest bite they can put on them. And these leeches include panderers from the highest professions. People who would never think of cheating their neighbors will not hesitate to pad an insurance claim. They seem to regard insurance not as a protection but as a slot-machine input that sooner or later should pay off for them—and the sooner and bigger, the better.

I'm Fed Up with Phony Claims

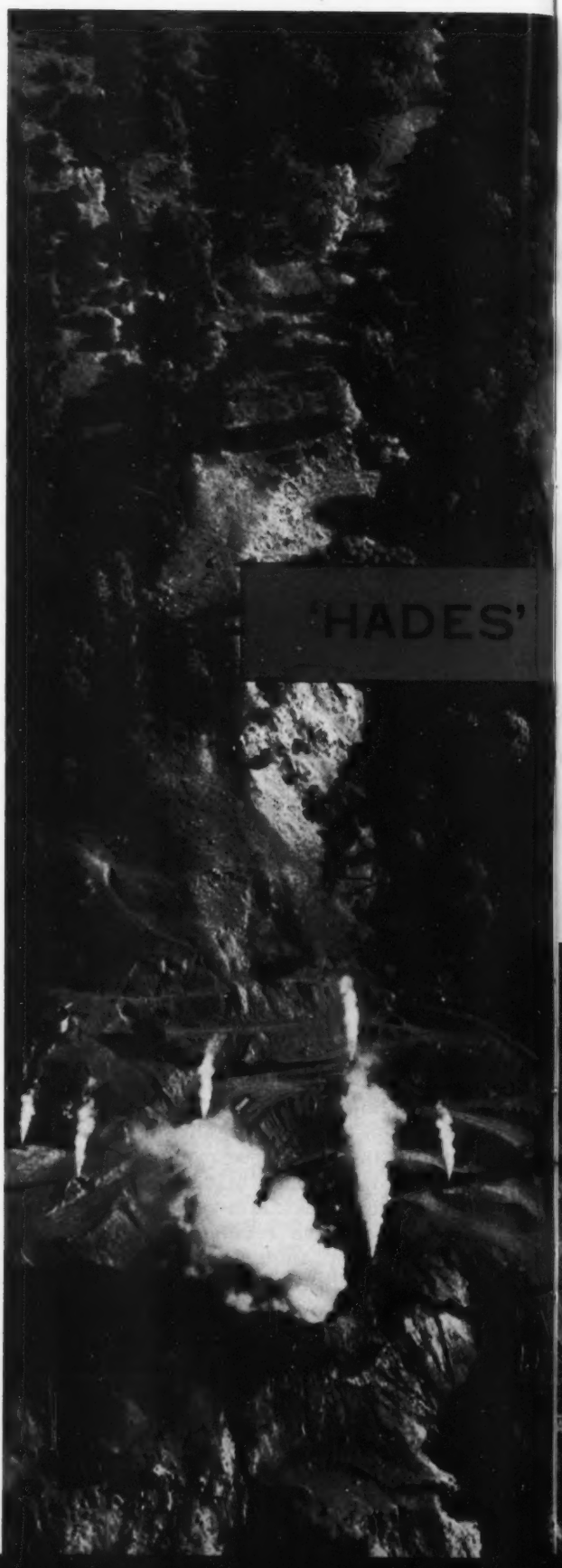
Lawyers will suggest pains or disability to clients who have never thought of making a personal injury claim. This is especially true of questionable property damage claims in which the owner of the car has been turned down.

Very often such a claimant will go to a lawyer for advice—and what advice! The lawyer begs off that it isn't worth his time to be arguing about repairs to a car; he would take the case if the man were only injured. Miraculously and suddenly the man gets a pain in his back. Now for the doctors. In fairness to doctors, their job is not easy. The law recognizes subjective symptoms as well as the objective ones as bases for claims. Even the best doctors can be fooled by subjective symptoms.

If the claimant is really injured, the doctor is entitled to be paid a fair fee. But either the claimant, his lawyer, or sometimes both, are not always satisfied with a fair bill. Because claims generally are settled by using multiples of medical bills and lost wages, the doctor often is persuaded to render a bill many times the correct and fair fee.

I know of one instance in which two elderly sisters were injured. They both sued through the same lawyer. However, they had different doctors. One had the old family physician, and his bill was $11. The other had a new doctor who had recently come to town. His bill was $500. Which doctor does the lawyer like?

In 36 years I've caught my share of the crooks on these fraudulent claims. But it's a discouraging and sickening business that cries out for a stiffening of public morals and vigorous public action. Even then a few sharpsters may escape us. Maybe old-fashioned retribution will take care of them, as was the case with the man I mentioned at the beginning. He had had a hernia for years. To a sympathetic neighbor, he said, "My old rupture is bothering me bad. I'm hoping to get a few days' work and then report it under compensation." He did. Sure enough, he got his operation and eight weeks of lost time. But it cost him his conscience, his sanity, a cut throat and his life. ⊙



IF MORTAL MAN might behold Hades, William Bell Elliott must have thought he had sighted it 113 years ago this April when he came upon gigantic spouts of steam in Big Sulphur Creek Canyon of Sonoma County, California.

Elliott was only innocently hunting grizzly bears that spring of 1847. What he had discovered were "The Geysers" which this spring are being tamed and harnessed for the first commercial plant in the U. S. to generate power from geothermal steam. It will be, too, the world's first privately-financed geothermal plant, although geothermal steam has heretofore been used in many places for heating. Use of it for generating electric power transpired only in this century, first at Lardello in Tuscany, Italy, and in New Zealand in 1958.

Come May 15, 1960, Pacific Gas and Electric Company plans to begin operation of the unique plant, a 12,500 KW unit, near Healdsburg, about 95 miles north of San Francisco. The necessary steam supply from The Geysers will be supplied under a contract with Magna Power Company and Thermal Power Company. Energy produced at the plant will be fed into the established P. G. and E. system.

This will be a $2 million construction-cost project, with total annual operating and maintenance costs of more than a half million dollars, fully insured from beginning to end and

First commercial U. S. plant of its kind will generate electricity from famous California geysers.

HARNESSED FOR POWER

Plumes at the lower left mark the geothermal steam wells which will produce electricity in the new P. G. and E. plant, first of its kind in the world (*lower right*). Some of the wells were drilled in 1922-25, others in 1955 and '57. At the plant (*inset*) the structure at the right will house a 12,500-kilowatt turbine-generator; at left will be the cooling tower.

expertly engineered for loss prevention as long advocated by the mutual insurance industry.

For example, owing to the forest fire hazard in The Geysers area, the cooling tower of the plant has been protected by concrete asbestos siding and roof decking. A further contemplated protection is spray wetting or a standard sprinkler system for the interior of the cooling tower. And behind the plant, elevated on a hill, is a 50,000-gallon water storage tank capable of giving 100 pounds pressure for fire fighting.

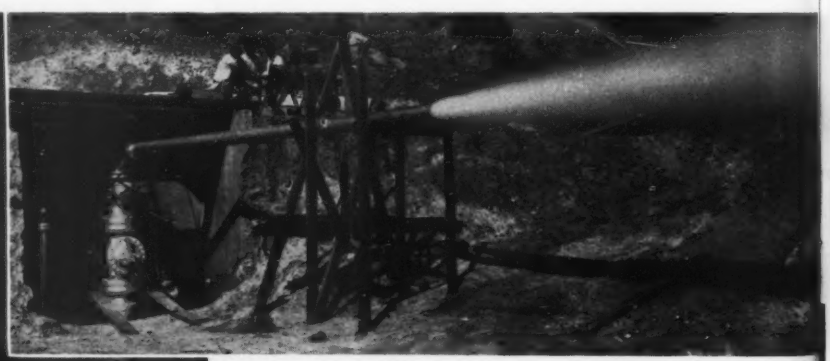
Insurance coverage on the plant will be the same as on a hydro plant, since there is no boiler, and boiler explosion hazard insurance therefore is not required. Thirty-three domestic insurance companies and one foreign insurer participate in the coverage on the plant which is insured under Pacific Gas and Electric Company's blanket policy for fire and lightning for the total of insurable value. The policy also is endorsed to cover losses under extended coverage and earthquake, with large deductibles.

Principal differences between the geothermal plant and the usual modern power plant, as explained by Albert W. Bruce, P. G. and E. supervising mechanical engineer, are (1) there is no boiler, hence steam condensate is not recycled but is used to provide the make-up water required for the evaporative cooling of the circulating water; (2) steam pressures are lower; and (3) the steam has much larger quantities of non-condensable gases which must be removed from the condenser to maintain the vacuum.

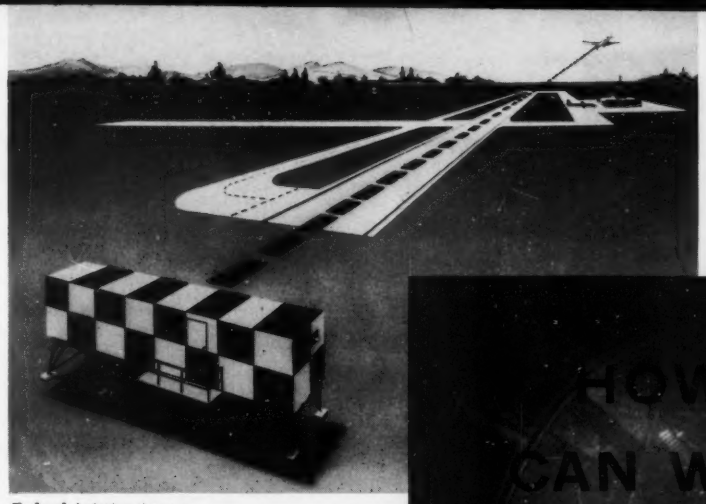
Other distinguishing features of The Geysers plant are that the turbine-generator will be at ground level; the steam will be condensed in a barometric condenser, and the non-condensable gases will be removed by large size steam jet gas ejectors; the corrosive qualities of the circulating water will require the use of corrosion-resistant alloy steels; the plant will be designed to operate automatically unattended, with remote alarm to a manned P. G. and E. substation.

Origin of the steam which has made The Geysers famous is a mystery giving rise to various opinions, but there is good agreement on the assured longevity of the supply. Fumaroles, the holes or orifices emitting the steam, have been known to exist in the area for more than 100 years; hearsay is that the activity has been more or less constant. Areas of similar activity throughout the world are of known existence for hundreds of years, particularly the Italian ones.

Even before discovered by William Bell Elliott, the California Hades-hued phenomenon must have had a high destiny for power or other purposes, for it became a tourist "must" and awed such "greats" as U. S. Grant, Theodore Roosevelt, Horace Greeley, Garibaldi and William Jennings Bryan. ⊙



One of the strongest wells in the group (*left*) performs while undergoing pressure tests. Boxlike housing is a partial silencer; noise of newly opened wells is almost deafening. Workmen wear protective ear muffs, write notes to communicate. In the close-up above, engineers test steam pressure and quality before plant hookup.



Federal Aviation Agency

Instrument landing system used in bad weather enables pilot to align his plane with center of runway. Only one-third of 569 U. S. airline airports have them—a sore point with the nation's pilots.

"BIG BROTHER" will soon be watching people who travel by air.

He'll have radar eyes, electronic brains, and the uncanny efficiency of George Orwell's sinister fictional version—but this one could be the harbinger of a new era in aviation safety. It's the Federal Aviation Agency's automated system for air traffic control, scheduled to go into use on some of the nation's busiest airways by 1963.

Key element in the new system is a giant electronic computer called a Data Processing Central, whose most spectacular function will be to detect and predict possible mid-air collisions. Swapping data automatically and at phenomenal speed, a network of these computers will compare each flight plan fed into it with all others filed by pilots anywhere in the nation.

The computer's "memory drum," taking into account each plane's route and speed, will pinpoint conflicts and sound a warning as much as 30 minutes before the planes arrive at the danger spot. Human controllers will provide an extra measure of protection by following all instrument-controlled flights on their radarscopes, ready to warn pilots of aircraft that may stray into their path.

Air Line Pilots Association

Jetliners crowd ramps at Chicago's O'Hare Field, built to relieve congestion at nearby Midway. The FAA is building a $1.7 million control center out of town to serve a four-state area.

A billion-dollar program already is underway to train more controllers and install all the equipment needed to get ready for automation. In the meantime, the FAA is working to patch up a system which, as one pilot puts it, "was still back in the DC-3 age when we switched to jets."

Electronic computers at Indianapolis speed work of human controllers by figuring where each plane will be at a given time. More advanced "brains" now being tested will be able to predict conflicts. Controllers also follow planes by radar, warn pilots if another plane gets too close. Most airliners now fly under their close surveillance.

Federal Aviation Agency

How Safe Can We Make Our Airways?

Efforts to improve the system were spurred by two mid-air collisions in 1958 and by last year's record-breaking rash of air disasters. The problem has become even more acute with the advent of jetliners costing $5 million each and carrying up to 170 passengers.

Aside from the human tragedy, the insurance losses alone on the crash of a single airliner could easily exceed $10 million. To meet these hazards, the insurance industry has set up two major pools to indemnify air carriers against property and liability losses, and has applied its safety-engineering facilities and technicians to such related problems as airport construction. In addition, insurance is supporting research on ways to make flying itself safer.

Radar Already Is in Use on Many Routes

Considerable progress already has been made in this direction by the FAA. By borrowing the Air Force's excellent long-range radar, FAA controllers have been able to set up a number of jet expressways above 24,000 feet, with radar surveillance from wheels up to wheels down.

Propeller planes are assigned altitudes between 17,000 and 24,000 feet. They also are under radar surveillance in congested areas, and will get coverage as complete as the jets as soon as more equipment can be installed.

All planes using these "positive control" airways are required to file flight plans and get clearance from the nearest FAA control center. By flying assigned routes and altitudes, each plane is assured of separation from all other instrument flights. Jets are given 100 miles of clear space ahead and behind, plus 1,000 feet above and below—a cube of airspace as big as Rhode Island. Slower-moving piston aircraft get 35 miles.

Chief flaw in this system, according to pilots, is that it is incapable of handling more than a fraction of the 50,000 or more planes aloft on an average day. As a result, planes flying under visual flight rules (where the pilot depends on looking out the window to avoid collisions) are still being mixed with instrument traffic on many airways, and near misses are frequent.

As the pilots see it, the Federal Aviation Agency's program doesn't go far enough, fast enough.

"The FAA says help will arrive in 1963 or some other future date, but we have a job to do now," says Clarence Sayen, outspoken president of the Air Line Pilots Association.

In testimony before a Senate subcommittee investigating the recent rash of air disasters, Sayen recommended putting all air traffic above

10,000 feet under instrument flight controls as quickly as possible. In addition, he urged all possible speed in developing an airborne anti-collision device to warn pilots they are on a collision course—and tell them what to do about it in time. (Bendix Aviation is scheduled to deliver an experimental model of such a device to the FAA's research center near Atlantic City this summer.)

The ALPA's main dissatisfaction, however, is with the nation's airports. Says Sayen, "In our opinion, no single category of preventable accidents has caused so much loss of life, injury, delay and substandard air service . . . as the continued lack of known and obtainable landing aids and airport safety standards."

Examining commercial aviation's 1959 safety record, the ALPA cites 14 airliner crashes that occurred during approach or landing, with a combined loss of 127 lives. These terminal area mishaps accounted for about 36 per cent of last year's record-breaking total of 39 U. S. air carrier accidents, 16 of them fatal, killing 271 passengers and 60 crew members.

The pilots contend that accidents in the vicinity of the airport almost invariably result, in whole or in part, from lack of adequate approach lights, runway lights, instrument landing devices, and runways long enough to handle today's fast-moving airliners. Another sore spot is the lack of runway visual range equipment, which measures ceiling and visibility to tell the pilot exactly how far down the runway he will be able to see as his plane glides in.

"Even our best equipped airports usually only have straight in, full instrument approach capability in one direction on one runway," says Sayen.

Federal Aviation Agency

Planes are guided between airports by a network of FAA radar and radio facilities. Long-range radar (left) helps maintain separation between planes on the airways. High-frequency radio (top) emits beams for the pilots to follow.

Divided Authority Hampers Airport Progress

One of the chief difficulties in modernizing the airports is divided authority for their operation. The Federal Aviation Agency sets the standards and provides many of the funds for installing safety equipment—but the city or state that operates the field must provide the land and the initiative. Land acquisition often gets snarled in local politics, especially when condemnation proceedings are necessary against property in the airport area. Adding still further complications, weather equipment must be approved and paid for by the Weather Bureau.

Some major improvements are on the way, however. The FAA is spending $57 million in fiscal 1960 for runways, taxiways, lighting and other facilities under the Federal Aid Airport Program. In addition, tests will begin this summer at Atlantic City on an airborne mechanism called REGAL (for Range and Elevation Guidance for Approach and Landing), designed to give pilots the continuous information they need for true blind landings in any kind of weather. Coupled with an electronic computer, the device will receive and translate data from ground-based radio transmitters to tell the pilot how far and how high the plane is from touchdown.

However, REGAL won't be ready until at least 1965. In the meantime, pilots are urging that more hardware already on the shelves be installed to bridge the gap.

Despite all the disagreement over what needs to be done, today's traveler can still go six times as far without fatal mishap by plane as he can by car. The fatality rate on scheduled airlines has dropped steadily since World War II, and has stayed considerably below one passenger per 100 million passenger-miles ever since 1951.

As the jet age comes into its own, there are reasonable grounds to hope for an era of safety and convenience in air travel as yet unmatched in all man's wanderings. ⊙

TIGHTER REINS ON RADIATION

New multi-million-dollar program attacks hazard problems as old as X ray.

ONE CURRENTLY POPULAR "sick" comic is now advising, "Don't worry about radiation. You'll know when you've had too much."

Fortunately for the public, a growing number of authorities would rather not wait, among them members of the National Advisory Committee on Radiation (NACR), formed in 1958 by U. S. Surgeon General Leroy E. Burney.

NACR is the group that took a hard one-year look at the control of radiation hazards in the United States, produced a lean, direct report on what needed to be done, and now reports encouraging headway in recent months.

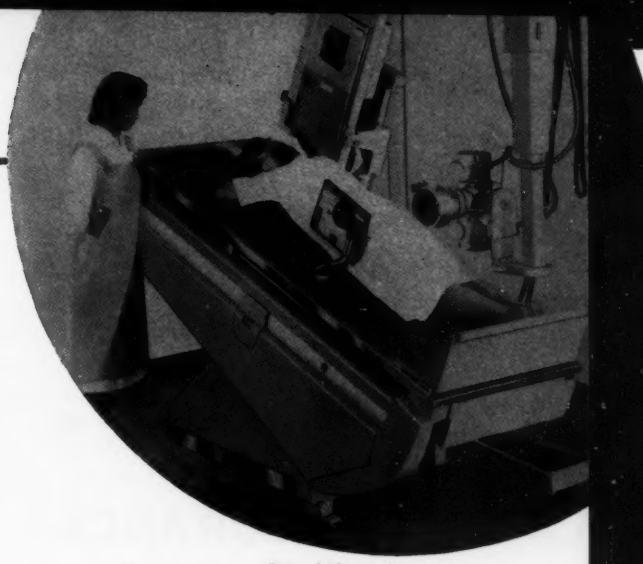
"Action which has been taken since the release of our report is quite gratifying," Dr. Russell H. Morgan, NACR chairman, informed the *Journal.* Morgan is radiologist-in-chief of the Johns Hopkins Hospital in Baltimore, Maryland.

"As recommended in the report, the budget of the Division of Radiological Health of the Public Health Service was increased in the current fiscal year to approximately $2½ million. It will possibly reach $6 million next year. This is a somewhat faster rate of growth than that suggested by the committee."

Overall recommendations of the NACR which have stimulated current progress in radiation protection involve a $50 million, five-year program reaching full development in 1965. Released last year, the NACR's full report opened on this uneasy note: "It is evident that serious health problems may be created by undue radiation exposure. . . . Every practical means should be adopted to limit such exposure both to the individual and to the population at large."

Though hard and fast rules remain to be fixed on how much radiation is "too much," this is known: Radiation exposure of the public has been steadily increasing ever since X rays were discovered in 1895. Over a 30-year period through 1955, average radiation exposure from X-ray equipment alone increased nine-fold. Rapid advances in the health and atomic industries in the past decade have vastly widened the

Standard Oil Company (Indiana)



Chief sources of public radiation exposure today are the X-ray machines used by health professions, which comprise majority of 200,000 units now in use. Rise in use of X-ray equipment and growth of atomic industry call for broad radiation controls, say the experts.

General Electric Company

danger of workers, patients, students, scientists and the man on the street making contact with ionizing radiation (the kind associated with X-ray machines, radioactive materials and nuclear energy, as contrasted, for example, with heat radiation).

More than 200,000 U. S. X-ray units are currently reported in use, compared to 125,000 in 1952, and they are being utilized extensively in industry as well as in medicine. The NACR has pointed out that despite nuclear industry progress, most of the man-made ionizing radiation received by Americans today comes from health-profession X-ray machines. Significantly, of the half dozen principal sources of ionizing radiation, X-ray equipment is one that has not been placed under substantial regulation, as have nuclear reactors and their fuels, radioisotopic by-products and radioactive wastes.

Controls on the latter have been well advised in view of mounting atomic hazards. Some 4,500 factories, hospitals, laboratories and other sources are now using radioisotopes, and 400 atomic reactors are either in operation, under construction or on the drawing board. Effectiveness of extensive safety controls is attested to by the fact that only two or three accidental exposures to radiation have occurred since 1956 at U. S. atomic plants, potentially the most dangerous of extant radiation sources.

The NACR credits the health professions with concerted efforts to reduce radiation exposure of patients undergoing X-ray diagnosis and treatment. But a fundamental conclusion of the NACR's report was this: "The absence of a comprehensive program through which the health hazards of *all* sources of ionizing radiation may be brought under supervision appears to this committee to be an important weakness in this nation's efforts to control radiation safely."

That weakness is being corrected, but enforcement of radiation protection regulations has in itself been the subject of heated controversy. Citing concrete state progress in radiation control, the NACR recommendation is that as much regulatory responsibility as possible be vested in state and local governments, and that the Public Health Service be assigned enforcement authority in areas where federal regulation is most appropriate.

Progress on this aspect of the NACR program has also already been recorded. Amendments made last year to the Atomic Energy Act represent the first steps in the transfer of many of the Atomic Energy Commission's regulatory functions to the states.

Other elements of the NACR-conceived overall radiation control effort include new emphasis on research for the development of uniform radiation standards, and creation of a broad range of training programs to provide the personnel for effective radiation protection. The committee's studies indicate that through 1970 the U. S. will need 1,200 radiation health specialists, trained to the graduate-degree level in problems of radiation protection. In addition, 4,000 radiological technicians must be developed, trained in operating radiation measuring equipment and conducting technical work under the supervision of radiation health specialists.

As world tensions flex uneasily, U. S. scientists are studying new weapons against radioactivity, including bone marrow banks and a pill that will guard against the dangers of atomic fallout during an attack. At the same time, and as the NACR has urged, we are proceeding toward tighter control of peacetime radiation hazards "with all deliberate speed." ⊙

Inspection of inner surfaces of vessels and piping for wear and corrosion is one of many new industrial applications of radioactive isotopes. Remote-controlled radiography unit is used under strict safety program.

Introducing:

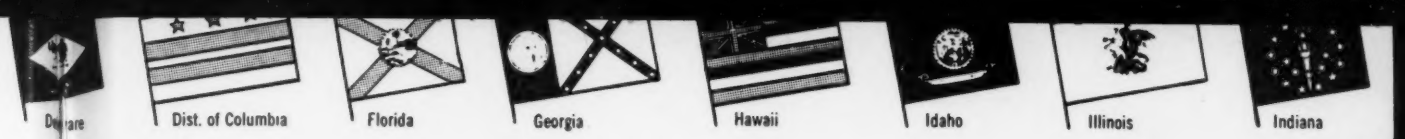
OUR 51 U. S. INSURANCE DEPARTMENTS

ONE OF the nation's biggest businesses—insurance—is under a system of state regulation dating back 129 years. Today more than 5,000 U. S. insurance companies are under the supervision of insurance departments of the nation's 50 states and District of Columbia. Those companies will bolster the economy in 1960 with premium writings of more than $31½ billion and state and federal tax revenue well in excess of $1 billion.

Though it was then modest in resources by today's standards, insurance was one of the vital economic forces in America even in 1831. That was the year in which New York's comptroller became the first state official vested with regulatory authority over insurance. In 1852, on the 100th anniversary of the founding of American mutual insurance, Indiana, New Hampshire and Vermont also initiated state supervision of the industry.

As in New York, states often first

State	Administrative head (Commissioner, superintendent or director, as designated)	Method of appointment	Term of office in years
Alabama	Edmon L. Rinehart, superintendent	Governor	4
Alaska	William M. Scott, director	Commissioner of Commerce	Indefinite
Arizona	George A. Bushnell, director	Commission	6
Arkansas	H. G. Combs, commissioner	Governor	4
California	F. Britton McConnell, commissioner	Governor	4
Colorado	Sam N. Beery, commissioner	Civil Service	Indefinite
Connecticut	Alfred N. Premo, commissioner	Governor	4
Delaware	Harry S. Smith, commissioner	Popular election	4
Dist. of Columbia	Albert F. Jordan, superintendent	Commission	Indefinite
Florida	J. Edwin Larson, commissioner	Popular election	4
Georgia	Zack D. Cravey, commissioner	Popular election	4
Hawaii	Charles H. Silva, commissioner	Governor	4
Idaho	Leo O'Connell, commissioner	Governor	4
Illinois	Joseph S. Gerber, director	Governor	2
Indiana	Alden C. Palmer, commissioner	Governor	Indefinite
Iowa	William E. Timmons, commissioner	Governor	4
Kansas	Frank Sullivan, commissioner	Popular election	2
Kentucky	William T. Hackensmith, commissioner	Governor	Indefinite
Louisiana	Rufus D. Hayes, commissioner	Popular election	4
Maine	George F. Mahoney, commissioner	Governor	4
Maryland	F. Douglass Sears, commissioner	Governor	4
Massachusetts	Otis M. Whitney, commissioner	Governor	3
Michigan	Frank Blackford, commissioner	Governor	4
Minnesota	Cyrus E. Magnusson, commissioner	Governor	6
Mississippi	Walter D. Davis, commissioner	Popular election	4
Missouri	C. Lawrence Leggett, superintendent	Governor	4
Montana	John J. Holmes, commissioner	Popular election	4
Nebraska	William E. Grubbs, director	Governor	2
Nevada	Paul A. Hammel, commissioner	Governor	4
New Hampshire	Donald Knowlton, commissioner	Governor	5
New Jersey	Charles R. Howell, commissioner	Governor	4
New Mexico	Ralph F. Apodaca, superintendent	Commission	Indefinite
New York	Thomas Thacher, superintendent	Governor	4
North Carolina	Charles F. Gold, commissioner	Popular election	4
North Dakota	A. J. Jensen, commissioner	Popular election	2
Ohio	Edward A. Stowell, superintendent	Governor	Indefinite
Oklahoma	Joe B. Hunt, commissioner	Popular election	4
Oregon	V. Dean Musser, commissioner	Governor	4
Pennsylvania	Francis R. Smith, commissioner	Governor	4
Rhode Island	Hartley F. Roberts, commissioner	Governor	2
South Carolina	R. Lee Kelly, commissioner	Elected by General Assembly	4
South Dakota	William J Dawson, commissioner	Governor	2
Tennessee	John R. Long, commissioner	Governor	4
Texas	Joe P. Gibbs, commissioner	Board	2
Utah	Carl A. Hulbert, commissioner	Commission	Indefinite
Vermont	Alexander H. Miller, commissioner	Governor	2
Virginia	T. Nelson Parker, commissioner	Commission	Indefinite
Washington	William A. Sullivan, commissioner	Popular election	4
West Virginia	C. Judson Pearson, commissioner	Governor	6
Wisconsin	Charles L. Manson, commissioner	Governor	4
Wyoming	Gilbert D. Hart, deputy commissioner	Board	Indefinite



Term of office in years	Annual salary(a)	State has regulated insurance since	Board or commission	Insurance department personnel	
				Total	Examiners
4	$9,000	1860	No	44	11
Indefinite	10,000	1913	No	4	0
6	9,600	1887	Yes; 3-man	24	2
4	10,000	1873	No	14	3
4	17,850	1868	No	217	37
Indefinite	10,424	1882	No	32	11
4	10,200	1865	No	60	18
4	6,000(b)	1879	No	7	0
Indefinite	15,150	1902	No	22	9
4	17,500(b)	1873	No	59	7
4	7,500(c)	1869	No	39	0
4	15,000(b)	1903	No	12	1
4	7,000	1891	No	8	5
2	15,000	1869	No	158	50
Indefinite	11,500(d)	1852	No	45	12
4	10,000	1856	No	43	15
2	7,500(e)	1871	No	52	8
Indefinite	10,000	1870	No	46	15
4	12,000	1879	No	32	9
4	10,000	1868	No	16	2
4	10,000	1872	No	44	11
3	12,500	1855	No	245	86
4	12,000	1871	No	72	18
6	11,250	1872	No	34	12
4	10,000	1857	No	12	0
4	12,000	1869	No	59	14
4	7,500(f)	1883	No	8	1
2	8,000	1865	No	29	10
4	10,000	1864	No	10	3
5	10,192	1852	No	13	1
4	20,000	1855	No	117	32
Indefinite	10,000	1882	Yes; Corporation Commission	25	0
4	20,486	1831	No (Advisory Board)	638	326
4	12,000	1874	No (Advisory Board)	70	19
2	6,000(g)	1883	No	13	3
Indefinite	14,000	1867	No	72	23
4	12,000	1890	Yes; State Insurance Board	26	0
4	10,000	1887	No	28	4
4	20,000	1873	No	163	59
2	8,242	1856	No	21	5
4	8,250	1876	No	38	1
2	6,300	1889	No	8	2
4	10,000	1876	No	65	6
2	15,000	1876	Yes; State Insurance Board	370	50
Indefinite	7,300	1884	Yes; Commission of Business Regulation	8	0
2	8,500	1852	No	5	1
Indefinite	11,500	1866	Yes; Corporation Commission	64	9
4	12,000	1890	No	55	15
6	9,000	1864	No	21	4
4	13,500	1870	No	61	16
Indefinite	7,200	1877	Yes; Board of Equalization	10	5

Based on 1958-1960 data

assigned insurance regulation to existing agencies, later created insurance departments as the responsibilities of supervision widened with the growth of the business. By 1860, 10 states were regulating insurance, and by 1870, the first half dozen insurance departments had been activated.

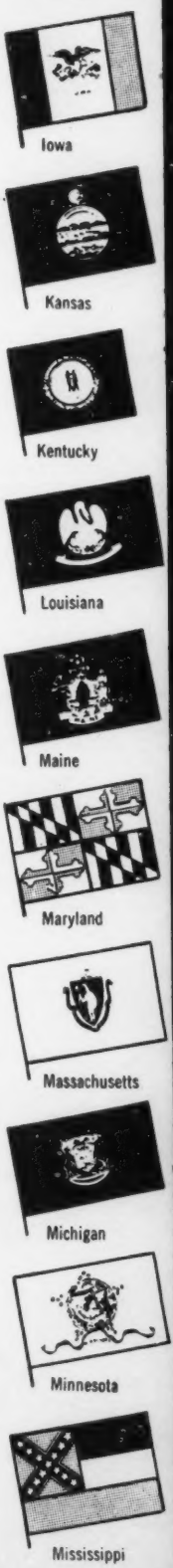
Expansion of state regulation led in short order to organization of the National Convention of Insurance Commissioners, which held its first annual meeting in New York in 1871. Now known as the National Association of Insurance Commissioners, this group has been continuously active and will hold its 1960 meeting this June in San Francisco.

The NAIC acts in an advisory and consultative capacity, with one of its principal roles being "to develop a community of interest among the state insurance departments leading to co-operation in the enactment and administration of uniform state laws for the regulation of the business of insurance."

Present headquarters of the NAIC, in Chicago, were opened 10 years ago this May. ⊙

KEY:

(a) Maximum or current as of September, 1959, as reported by the Council of State Governments
(b) Insurance commissioner is also state treasurer
(c) Law provides $7,500 minimum plus $800 for each four years of service
(d) Effective January 9, 1961, by statute
(e) $9,000 after January, 1961
(f) Insurance commissioner is also state auditor
(g) Plus $1,500 unaudited expense account



University of Illinois Photos

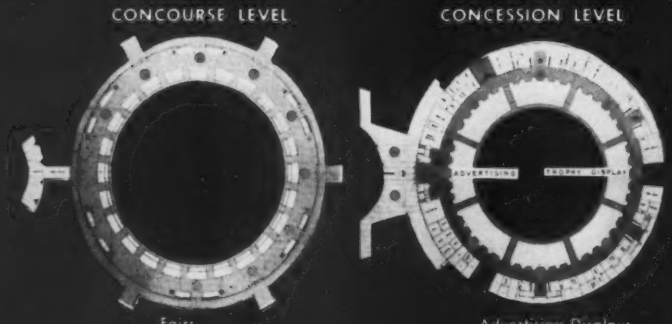
Model of interior (*top left*) shows how slope of terrain permits entering hall at approximately a mid-point by ramps to a circular concourse, from where patrons walk up or down to seats. At the rear the huge bowl is partially underground.

New Illini history is being made in the unique hall's construction (*top right*) and by its protective mutual insurance. At press time the construction record totaled more than 100,000 man hours completely free of any major accident case.

←

Adaptation of the hall to any one of 20 or more functions, for audiences as large as 19,000, is shown in the floor plans at the left. Every spectator, at whatever type of event, will have one of those prized seats—an unobstructed view.

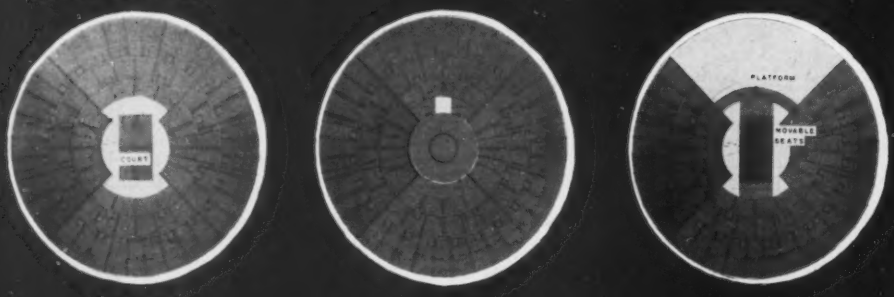
A Coliseum for Many Varied Congregations



Fairs
Exhibitions

Advertising Displays
Trophy Exhibits

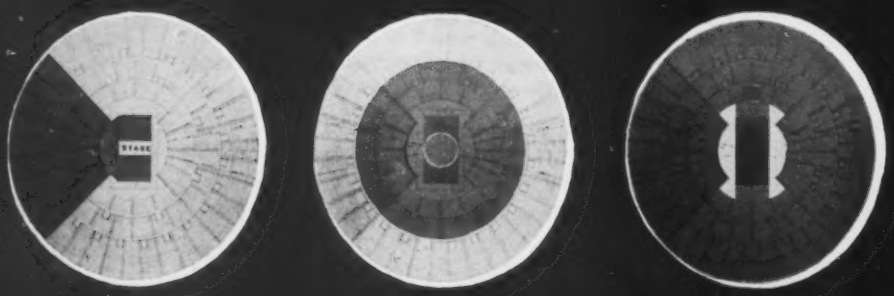
ASSEMBLY HALL USES



Basketball

Pageant
Circus

Speaker



Opera
Ballet
Movie
Television
Stage Show
Concert

Folk Dancing
Recital
Drama
Concert

Graduation
Convocation
Convention

LANDMARK ON THE PRAIRIES

Construction of U. of I. Assembly Hall, mutual insured, crowns historic landscape with a nationally unique sight.

A COLOSSAL, fantastic "wigwam" is rising on the Illinois prairies like a 20th century amplitude of the dome-shaped Indian structures once dotted across the Great Lakes region.

Only "colossal" is a fitting description of the new University of Illinois Assembly Hall, for the $6½ million construction contract will erect an edifice uniquely adaptable for any one of 20 or more functions with audiences as large as 19,000. Heretofore, nearby Memorial Stadium has been the colossus on the Illini scene. Assembly Hall will completely dwarf the stadium.

"Fantastic" is merited for the new structure by one fact, not to mention others: Every one of the spectators, at whatever type of event, will have an unobstructed view of what is taking place. When completed, Assembly Hall will be one of the nation's largest structures of its kind.

Mutual insurance, already 115 years old when the University of Illinois was chartered in 1867, also is making history with Assembly Hall. Employers Mutual Liability Insurance Company of Wausau, Wisconsin, is the insurer on the multi-million-dollar risk of the project's contractor, Felmley-Dickerson Company of Bloomington and Urbana, Illinois.

In credit to the safety engineering prowess of mutual insurance and to the credit of the contractor and his men, the construction record as of now shows 100,000 man hours without a major accident. Thus far, every single man on the job has been able to complete his shift of work.

In creating the design, Max Abramovitz, of Harrison and Abramovitz, architects, inverted one huge bowl over the other. Where the two join, an internal ring footing containing about 600 miles of wire converts the thrust of the overturned bowl into the supporting ribs of the upturned one.

From the time of the Greeks, it has been known that such a round, open amphitheater design was best suited for unobstructed view. But only modern technology in concrete construction has enabled the builder to roof over great spaces without supporting pillars. In the 30's and 40's, Torroja in Spain, Nervi in Italy,

and Niemeyer in Brazil pioneered the concrete shell construction which is springing up in various parts of the U. S.

Along with concrete, great quantities of glass, steel and aluminum will be embodied in Assembly Hall.

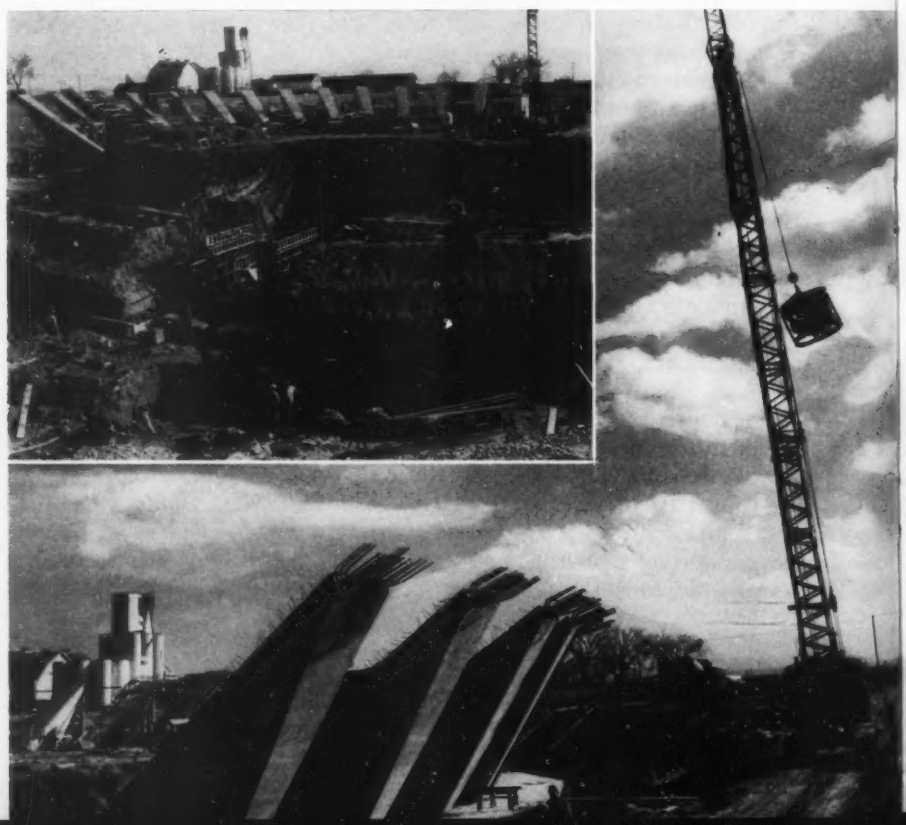
From beginning to end, construction is being protected with the full range of mutual insurance resources and services, including safety engineering and loss prevention in addition to the standard insurance coverages for public liability and workmen's compensation. At peak strength, the work crew is about 250 men.

Most hazardous of the operations will be the lifting of the roof sections. But like all other steps in the construction, this one was studied and discussed in pre-planning sessions between the insurer and the contractor before the insurance contract was completed. Joe Huntman, safety engineer, has represented Employers Mutual in these sessions and will continue to do so to the project's completion; Edward Maliskas is the contractor's project superintendent.

For the tough roof placement job, a temporary tower capable of supporting 3 million pounds will be erected in the center of the structure. An unusual feature of the tower will be the incorporation of a riser type of scaffold which will move up as the tower progresses. Handrails will give support and protection to workmen on the scaffold walkways; toe boards will be preventives against tools or other objects being knocked off onto workmen below. Such are the many safeguards constantly in effect on the project in keeping with the best traditions of the mutual insurance industry.

Stout fencing shields the entire project. Even high-level visitors from New York University, Northwestern University and other points are permitted on the scene for study and inspection only on conducted tours. At night the gates are locked and the area guarded.

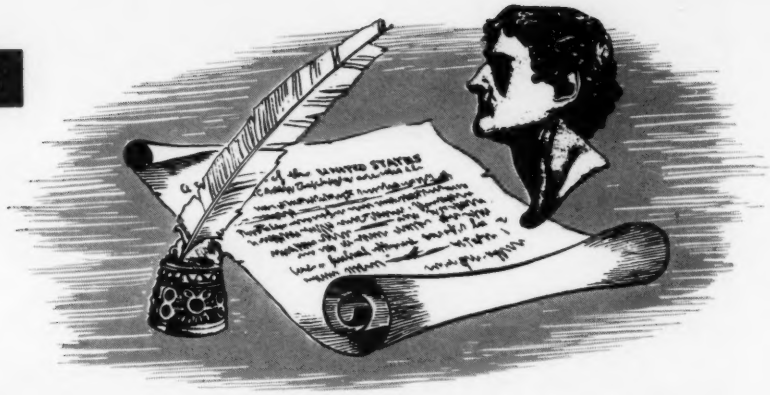
One of the many unusual sights will be the earth-moving out of the center section to accommodate the upturned-bowl section of the mammoth structure. This earth will not be removed until near the finished stage. One advantage therefrom will be that cranes for the roof work can stand 35 feet higher. With the earth excavated, approximately one-half of the projected huge seating capacity will be below ground level. Hence there will be no balconies, no excessive climbing to upper seats and only a minimum of crowd pressure. If an eerie murmur is detected in the crowd noises, it could well be the spirit of the long-departed Algonquians in an accolade akin to, "Heap big wigwam." ⊙



Long before this construction started on the hall, safety engineering details were carefully planned by the mutual insurer and the contractor. Here the first buttresses are in place for the $7½ million structure. In the background are the university elevator and the beef cattle buildings.

Buttresses supporting the dome will be inside, with a glass-and-steel-enclosed concourse 30 feet wide and 1,100 feet around the building. Lifting of the roof sections will be the job's top hazard. Weight of the dome will be borne by the buttresses through 600 miles of wire around the rim.

FROM OUR ANNALS



THOMAS JEFFERSON

April 13, 1743-July 4, 1826

THOMAS JEFFERSON'S natal month of April brings the present summit-maze of international affairs into juxtaposition with a Jefferson presidential coup d'etat which still stands as the best deal in American diplomatic history.

It was in April, 1803, that the envoys of President Jefferson consummated the bargaining for the purchase of the Louisiana Territory from France without any threats or counterthreats and for the mere price of $15 million. Furthermore, Jefferson, following Alexander Hamilton's famous example and doctrine of implied powers, had completed the purchase sans authorization from the Constitution or from Congress, confident that it was the best thing to do.

Although the purchase treaty was not ratified until October 21, 1803, and the flag-raising over New Orleans was postponed until December 20, the deal at one stroke increased the national domain by 140 per cent. Out of that were carved all or part of 13 states. The frontier was pushed back 1,500 miles and the Mississippi was made secure as a highway for western commerce.

Jefferson likewise helped implant long-range means of protection and security when he, along with Benjamin Franklin and John Marshall, identified himself conspicuously with the early mutual insurance companies. His beloved Monticello (front cover), in addition to its other monumental virtues, is a memorial to mutual insurance and to the Mutual Assurance Society of Virginia, which issued the policy.

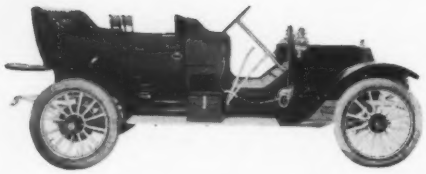
But for posterity, Jefferson ordained in his self-written tombstone inscription that he be remembered only as ". . . author of the Declaration of Independence; of the Statute of Virginia for Religious Freedom; and Father of the University of Virginia."

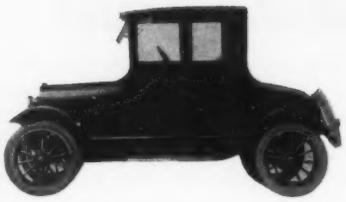
His statute for religious freedom is all the more appropriately recalled for the times of the 60's, inasmuch as it was one of the five "Bills of Freedom" introduced by Jefferson in the Virginia legislature shortly after his drawing up of the Declaration of Independence. This historic Virginia statute abolished all official ties between church and state and became the pattern for the religious freedom clause in the federal and state constitutions.

The first of the five Bills of Freedom was to free real estate from entailments, a practice by which land was tied up forever to certain descendants. The second was to free property in general from primogeniture, whereby the firstborn inherited all and pauperized the rest. The third was to free the body by striking at the root of slavery. Jefferson had included a similar provision in the Declaration, but it was not retained. The fourth bill was to free the mind by establishing a statewide system of free public schools.

If lasting peace with justice ever becomes a world reality, Jefferson will stand forth as the original keynoter, for he was history's tireless champion of human rights, freedom, equality and education. ⊙

THIS CHANGING MOTORIZED WORLD





From the horseless carriage to the air car, insurance has devised the protective measures.

Carriages without horses shall go
And accidents fill the world with woe.
—MOTHER SHIPTON, 15TH CENTURY.

NOBODY IS REALLY sure whether Old Mother Shipton ever existed, but this prophecy attributed to her certainly has been borne out in the fascinating history of America's horseless carriages.

Ever since that April day in 1892 when Frank Duryea shattered the complacency of Springfield, Massachusetts, with a trial run in his first workable automobile, accidents have followed the trail of the "tinkerers" who changed an entire nation's way of life.

Insurance, which joined forces with the noisy new contraptions when most people were still saying "get a horse," has grown and changed with the auto industry and all the problems it has created over the years.

Early auto hazards were perfectly illustrated in the nation's first endurance run, which took place in Chicago on Thanksgiving Day, 1895. The race began in the Loop, with a Duryea, a German Benz, a Sturgess electric, a Haynes-Apperson and two other cars participating. The course was to be 53 miles, to Evanston and back; but the Haynes-Apperson ran afoul of a streetcar and smashed a wheel just before the start, another entry collided with a horse car near the Art Institute, and the two electrics dropped out early because the batteries ran down battling a three-inch snowfall. Only two cars finished, with the Duryea out-speeding the Benz at an average rate of 7.5 mph.

Early autos were essentially motorized buggies, complete with dashboard and spoke wheels. This 1896 Benz has motor under the seat, levers for steering. Frank Duryea's pioneer U. S. auto was a big hit that year at the Barnum and Bailey Circus.

Vories Fisher

Oldsmobile Division, General Motors Corporation

Oldsmobile brought out this 10 h.p. model in 1905, abandoning the earlier curved-dash car that inspired "In My Merry Oldsmobile." In those days, car owners who bought fire insurance were covered against theft free. Nobody dared steal an auto.

The race caused so many runaways that the South Park Board met the next day and indignantly barred all motor vehicles from South Side streets.

Gilbert Loomis, a gifted mechanic from Westfield, Massachusetts, was the first to acknowledge motoring's hazards by taking out the first auto insurance policy ever issued. The year was 1897, and the auto was a one-cylinder machine he had built himself one year earlier. He paid $7.50 for $1,000 of liability insurance, written by the Travelers Insurance Company on a teams liability form then used for insuring horse-drawn vehicles.

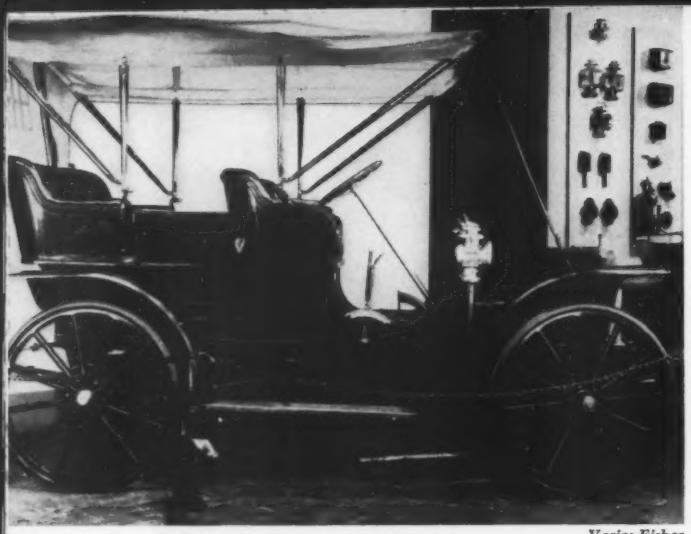
Loomis himself had only one minor accident in 60 years of driving, but his experiences as manufacturer of the Speedwell car prove that fraudulent liability claims are as old as insurance.

As he told the story, it was the custom at the Speedwell plant to test all chassis on the road before the body was added. The company took out a special liability policy to cover the cars during testing.

One day a tester reported he had killed a dog

Henry Ford started the new industrial revolution with this 1908 Model T, which he and two friends drove 1,357 miles to prove its ruggedness. Mutual insurance had already entered the field to insure drivers against early motoring hazards.

Ford Motor Company



Vories Fisher

Splendid ventilation was afforded by this surrey-topped 1909 Gleason, one of more than 1,800 names that have faded into oblivion since the days when auto driving was an adventure.

This Changing Motorized World

which had shot out of the bushes, and a woman soon appeared to demand $10 for the loss of her pet. The insurance company paid. But when the same thing occurred twice more, Loomis called in a detective.

"He got the facts," Loomis recalled. "This woman had been buying dogs at the dog pound for a dollar each. She had two young sons, and when one of our cars approached, one son would hold a dog in the bushes on one side of the road while the other, holding a bone, hid in bushes across the way. At the right moment, Number Two Son waved the bone, Number One Son released the dog, and the animal sprinted across the road."

In court, the judge said, "Cruelty to animals. Thirty days."

By 1902, it became apparent that liability protection was not enough. Gas tanks blew up with distressing frequency on some of the early models, creating a substantial fire hazard. A Boston company began offering fire insurance in addition to the basic liability protection, and boiler insurance was added for drivers of the early steam cars.

Early Cars Were Too Conspicuous to Steal

Three years later, fire policies were broadened to include protection against theft at no extra premium. In those days, cars were such a novelty that only a foolhardy thief would dare steal one.

Collision hazards grew swiftly, however, as the roads began to resound with the noise of the Winton, Packard, and the "Merry Oldsmobile," not to mention the Deere, Colt, Dragon, Lion, Wolf and, alas, the Dodo.

Insurance coverage against collision damage dates from 1907, the same year mutual insurance entered the auto underwriting field in answer to an old complaint: Auto insurance was getting expensive.

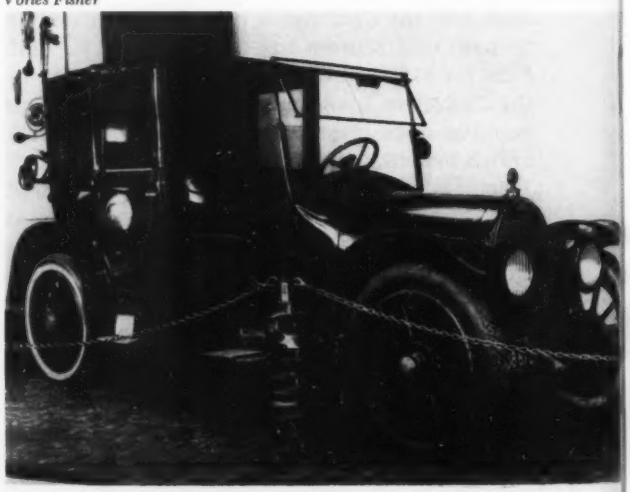
Public liability protection alone cost $100 a year for a private vehicle—considerably more, incidentally, than the average motorist pays today for that portion of his auto insurance policy. For that $100, the 1907 driver was protected only against injuries he might cause to other persons or animals, with no coverage against property damage, fire, theft or collision included.

A group of Rhode Island businessmen decided in 1907 to form their own company on mutual principles and reduce losses (and rates) through a careful selection of drivers—which remains the keystone of mutual insurance today. At the end of the first year, the company, Automobile Mutual Insurance Company of America, Providence, was able to return a dividend of 25 per cent to its policyholders, and has never paid less than that since.

Today, auto insurance amounts to $6 billion a year in premiums, and motor cars are a far cry from the horseless carriages of 1907. But with 82 million drivers on the road, the quest for better protection against the hazards of motoring is still going on.

Insurance is helping in two ways: By offering

Vories Fisher



broader coverages for the individual motorist, and by working to obtain better roads, safer cars and more adequate laws.

A long step toward better coverages was taken in 1956, when all major segments of the insurance industry got together and drafted a new family auto policy in recognition of the fact that the auto is now a family institution. Instead of insuring each driver individually, it provides blanket protection for all members of the household against all the major financial hazards of operating a car.

More recently, merit rating plans were introduced in some states in an effort to give drivers a dollars and cents incentive to drive safely, and to make motorists with bad records pay a fairer share of the expenses. Such plans, however, depart somewhat from the basic tenet of insurance: A pooling of all the risks, with small sums from the many to cover losses of the few. When a driver's record gets so bad that no company will willingly insure him, all states provide an assigned risk program under which insurers agree to accept their pro rata share of the bad ones to keep such motorists from driving around uninsured.

One of the more significant attempts to deal with irresponsible motorists is the insurance industry's Program for Responsibility on Our Highways. It is a series of legislative recommendations designed to remove reckless drivers from the road, and to make certain every motorist is either insured or otherwise financially able to pay for damages and injuries he may cause.

The program also stresses highway safety and includes such items as driver education, tighter licensing, a no-fix traffic ticket system, chemical tests for intoxication, a point system for driver control, and requirements that drivers involved in accidents either show proof of their ability to pay or lose their right to drive.

Insurance companies also have developed and made widely available a form of coverage that will reimburse a motorist for damages caused by uninsured drivers unable to pay for the consequences of their acts.

Insurance Supports Auto Injury Research

A considerable amount of insurance-sponsored research is being devoted to the causes of injuries in auto accidents, and on ways automobiles can be redesigned to make them safer. In addition, insurance companies and their trade organizations work closely with law enforcement agencies, safety officials and other public and private agencies on methods of obtaining better traffic control.

Such co-operation within the industry has not stilled strong competition among individual companies to provide still better coverages and more personal services for the motorists who depend on them.

The shade-tree mechanics who once built horseless carriages have moved on to air cars and space rockets, which somehow were overlooked in Old Mother Shipton's prophecy. But as long as "accidents fill the world with woe," insurance will follow them wherever they go. ⊙

Brewster-Laundelet of 1914 illustrates Europe's tendency toward big, expensive cars when American auto manufacturers were learning to exploit cheap transportation for everybody. Unfortunately, accidents followed—a problem insurers and others are still trying to solve. ←

Newest horseless carriage is this air car invented by Dr. William Bertelsen of Neponset, Illinois. "Aeromobile" hovers few inches off ground on jets of air, also travels over snow, water. If it catches on, insurance will soon find a way to protect drivers and the public against all its special hazards.

Wide World

ATOMIC ENERGY'S S

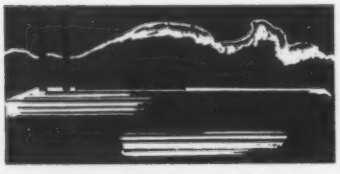
Nuclear energy insurance pool pro

Closely guarded against, main hazard of the atomic industry is contamination of property, not personal injury. About 200 nuclear liability insurance contracts are now in force, and only one minor claim has occurred to date.

AMERICANS HAVE BEEN panicky before—in 1819, 1837, 1873, 1901, 1929 and 1933, to pick a few economic crises from history. They are uneasy now about atomic energy and nuclear power. But never in history have industry and the public had the massive financial protection which has been set up for them by the insurance business against the risks and hazards of the oncoming nuclear-power era.

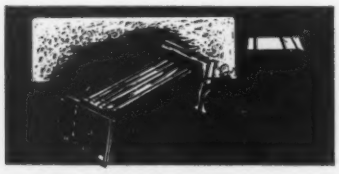
As presented in the accompanying chart, the program has just rounded out the first five years. In March, 1955, an insurance study group composed of top insurance executives was formed by the Atomic Energy Commission to cope with problems created by the expanding industrial use of atomic energy and radioactive isotopes. The nuclear energy pools shown here were then set up in the spring of 1956.

Mutual insurance organized a 105-company combination property damage and liability facility known as Mutual Atomic Energy Reinsurance Pool (MAERP), with administrative headquarters at the American Mutual Reinsurance Company in Chicago, J. P. Gibson, Jr., president. Stock insurance companies formed two pools. Nuclear Energy Liability Insurance Association (NELIA) has 140 stock casualty companies. NEPIA—Nuclear Energy Property



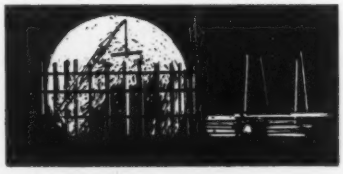
Nuclear fuel fabrication

Nuclear energy policies guard against loss during manufacturing, processing or reprocessing of atomic fuel elements. Fuel procurement—mining, milling and exploration operations—does not require huge pool policies.



Fuel storage and transportation

Among the most newly developed atomic coverages are those for transporters and shippers of atomic materials, who today truck fuel elements throughout the nation. Coverage is now available by trip or on a schedule basis.

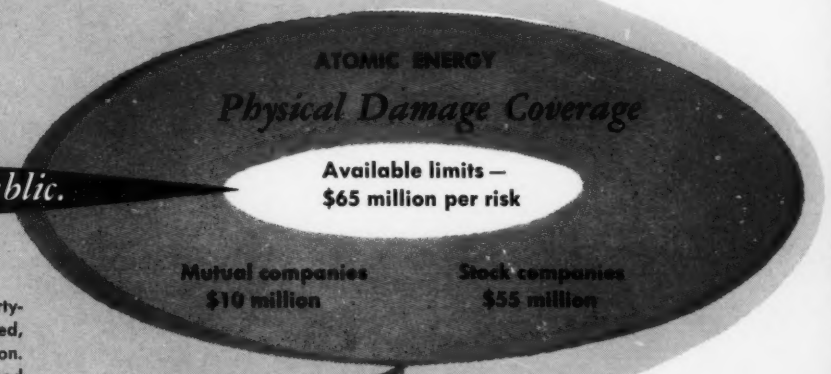


Atomic reactor construction

Insurance coverages never before equaled protect operators, designers, contractors and suppliers of nuclear facilities, as well as investors and the general public. Reactors insured include power, research, test units.

'S SUPER INSURANCE

pools protect atomic industry and public.



Policies for some 100 atomic property-insurance contracts have been issued, with limits ranging up to $64 million. Property contracts provide boiler and machinery, fire and other coverages, as well as nuclear hazard protection.

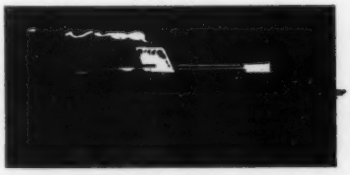
Insurance Association—has 189 member stock companies. General managers of NELIA and NEPIA respectively are J. Dewey Dorsett and W. H. Forristall.

Private insurance available through the pools is augmented by government funds. This is provided under the Price-Anderson Act, effective September 2, 1957. It authorizes the Atomic Energy Commission to afford AEC licensees U. S. government indemnity to the extent not covered by private insurance, up to as much as $500 million per nuclear incident.

Thus, for modern-day jitters, coverages never before equaled assure the most widespread financial protection—for the man on the street as well as for the most dangerously-placed plant worker.

The first nuclear risk was insured in the pools in March, 1957. Today, more than 300 policies are in force. Only a relatively few minor losses have occurred, along with one $100,000 property claim from a fire not of nuclear origin.

Supplementing the massive insurance, the safety-engineering know-how of the insurance industry has been marshalled to help give the atomic era the greatest array of safeguards in history. ⊙



Reactor operations

Reactor insurance protection includes coverage on demonstration models and on "hot laboratories" and "critical facilities." Premiums for high hazard nuclear risks are set by specialists in physical damage, liability fields.

Spent fuel handling

Exhaustive safety measures accompany handling of spent fuel and other nuclear industry operations. Radiation injuries have caused fewer than one per cent of all lost-time accidents in the U. S. atomic program dating from 1943.

Waste disposal

Recent stir in Los Angeles area highlighted biggest of nuclear problems, where to safely dump industry's ashes. Atomic insurance applies to the disposal of highly radioactive wastes, as well as to other hazards of industry.

CHARLIE II SLEPT

Animal kingdom travelers, some insured for $200,000, are sheltered in this New York City Animalport.

EVEN IN THESE DAYS of inflated prices, $1 will still get you a day's guest privileges for a bag of non-poisonous snakes in the first and finest hostel of its kind in the United States.

It is the Sydney H. Coleman Animalport maintained at the New York International Airport by the American Society for the Prevention of Cruelty to Animals and dedicated to the care and comfort of pets and animals traveling to or from any point in the world.

Including such royalty as Charlie II, the Animalport's first lion guest, some 100,000 animals and pets a year pass through the airport. Until the $275,000 Animalport was dedicated a little more than two years ago, these travelers were housed and cared for as "cargo" in airport cargo buildings. Now they are fed, watered, exercised, bedded down and attended in their own "inn" by a well-trained staff. Rates range from the $1 a day for the harmless snakes or a cat to $7 a day for a horse.

Not the least of the hospitality and protection afforded the guests is a blanket insurance policy covering each animal up to $5,000 against loss, fire, theft or disappearance. Thus far not one claim has had to be paid. The building itself is insured for $200,000 and the contents for $10,000. The liability limits in the policy are $200,000 to $1 million.

Additionally, most owners have their own insurance on any valuable animal. Goldie, Arthur Godfrey's palomino, which spent a night at the Animalport, was insured for $200,000, the highest known coverage on any single guest. Insurance of $2,000,000 was carried on the group of six European trotting horse champions which were quarantined at the Animalport for 24 hours before racing in the international trot at Roosevelt Raceway. Another hosted celebrity, Kentucky Derby winner Iron Liege, on his way to race in England, was reputed to be worth $274,000, but the insurance details are not known.

Charlie II, the lion, was endued not so much with insurance as with affection and sentiment. He had been the mascot of an Army unit in Germany, but at 18 months of age had outgrown that role and was on his way to the Cincinnati zoo.

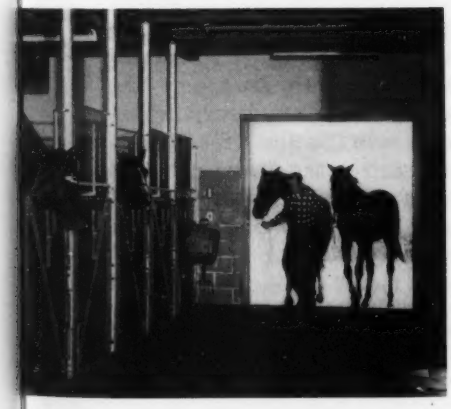
Other services of the Animalport include ambulance facilities, calling for and delivering animals in the New York metropolitan area, supplying crates, a private on-call veterinarian, procuring animal health certificates and providing a scientific diet for any type animal.

It is another "first" for New York, starting with that state's being the first state to pass a law, on March 9, 1894, requiring dogs to be licensed. In the best protective traditions of American insurance, the statute provided "for the better protection of lost and strayed animals and for securing the rights of owners." ⊙

HERE

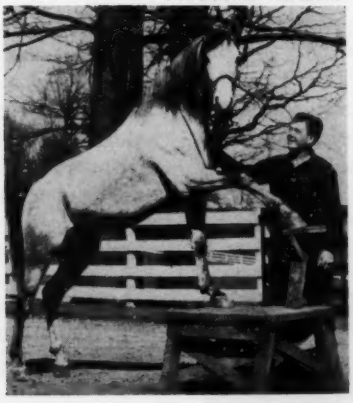
Fatigued and hungry at the end of its long flight from the Belgian Congo, the baby gorilla has a rewarding reception by its owner at the ASPCA's Animalport. Some 100,000 such animals and pets pass through terminal in a year's time.

Port's stable provides 13 individual stalls, with an adjoining outdoor paddock. Two valuable racers, insured, are led in by resident manager, G. F. Bauer.

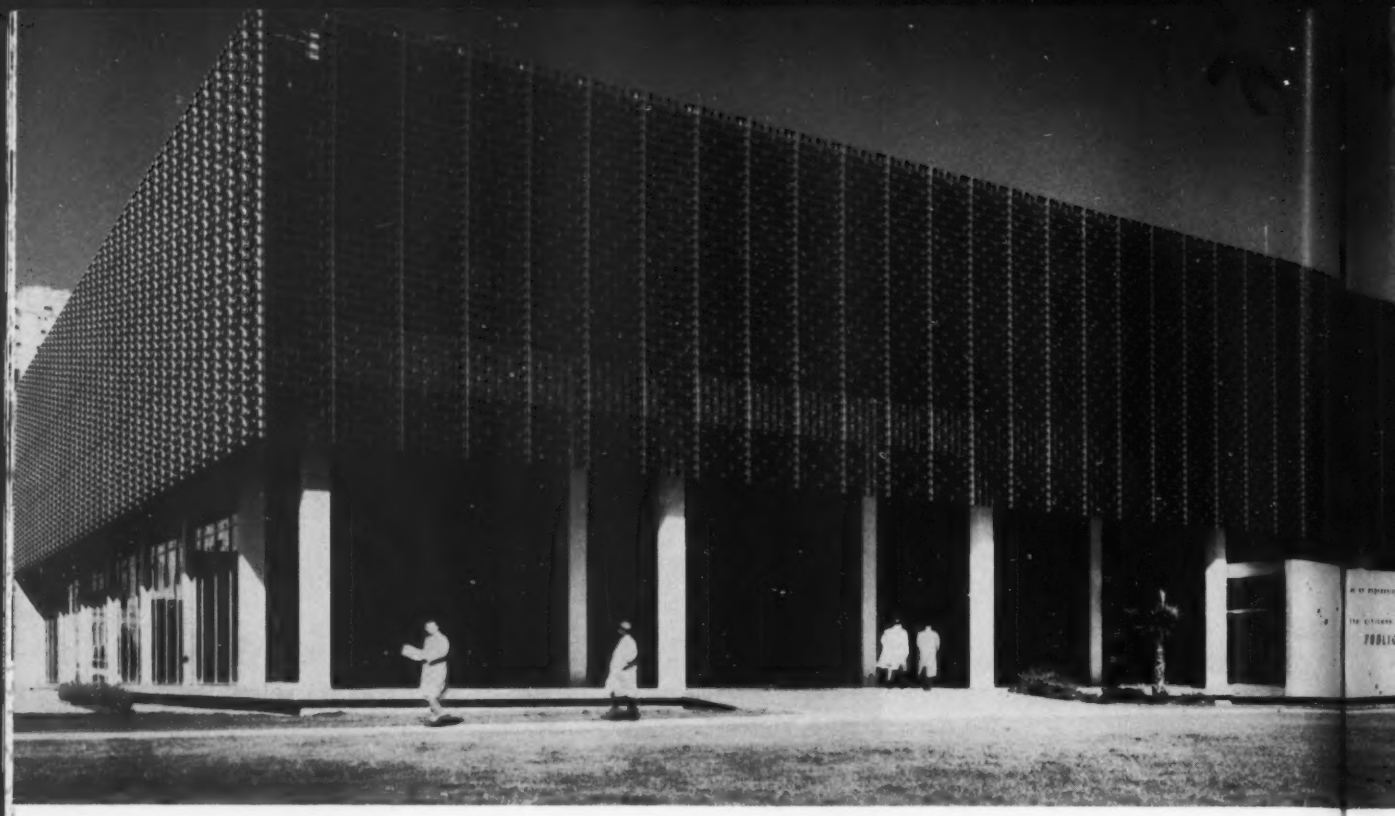


Highest known insurance coverage on any one animal handled at port was $200,000 on Arthur Godfrey's palomino, Goldie, which stayed overnight.

CBS Television Network



This pet crow, sent from Germany by his soldier-owner, enjoys real U. S. hospitality extended by one of the hostel's experienced staff handling many chores.



Fire safeguards and insurance share sentinel honors of National Library Week.

A FEROCIOUS book-burning by some well-meaning people in Massachusetts has dispelled two time-honored myths of the library world. This could mean the end of regrettable book-burning for all time.

Myth 1 is that "books just don't burn." *Myth 2:* If they did, water from an automatic sprinkler system would do more damage than the fire would.

Fifteen thousand books went up in flames to disprove these widely held beliefs on book-burning in its literal sense. Tests in December at Factory Mutual Engineering Division Laboratories, Norwood, Massachusetts, proved conclusively that (1) books burn very well indeed, and (2) to put an end to such tragedies in the future, there would appear to be no more effective method than a total sprinkler system in every one of the nation's more than 18,000 libraries.

The tests came about because the New York Public Library, largest in the U. S., wanted the greatest possible fire protection and the lowest possible insurance rates for its priceless collection of nearly 6 million volumes. Its insurer, Firemen's Mutual Insurance Company, suggested sprinklers. But the Library wanted proof of the need and the results. So the tests were run, to settle these questions for all libraries.

With old, discarded books on heavy metal stacks duplicating those in the New York library, engineers set two fires. For the first, sprinklers had been installed. They discharged automati-

Bettman Archive

America's first subscription library, in Philadelphia, was opened by Benjamin Franklin in 1731. He served as librarian three months, later as secretary and purchasing agent. His own library of 4,276 books was largest in U.S. when he died.

A far cry from the stereotyped "stuffy" public library is New Orleans' new $3.3 million "Cinderella library." Its three glass walls are shaded from direct sun, glare by aluminum sunscreen. Fire-resistant glass encloses inner well, with two open patios.

NO BOOK-BURNING HERE

Frank Lotz Miller

cally, stopped the spread of fire almost immediately, and gradually extinguished the blaze. Ten per cent of the books were charred on the edges and 27 per cent were wet; all could be repaired. There was no damage to the other 63 per cent.

For the second test there were no sprinklers. Within 10 minutes all four levels of shelving were ablaze. The temperature at the top exceeded 1,500 degrees. The metal shelves began to buckle and melt, and the uprights began to sag. Fearful the whole test building would be destroyed, firemen put out the blaze.

Probing the ruins, investigators found 89 per cent of the books charred deeply or completely destroyed, 2½ per cent scorched, the rest soaked and ripped by the terrific pressure of the fire hoses. Ninety per cent of the books were beyond salvage. In addition, three-fourths of the shelving was damaged irreparably, and complete collapse of the structure was believed imminent when the hoses were turned on.

These tests settled the book-burning question for the New York Public Library, where the whole 800-seat reading room could collapse if the seven-tier stacks below should catch fire. They also proved the value of sprinklers. With this proof, libraries have a dependable weapon against at least one type of book-burning which has haunted them in the past.

The cost of installing sprinklers sometimes is labeled prohibitive. But for one representative library, a fire protection expert has calculated, a sprinkler system would pay for itself in insurance savings alone within 19 years. For a typical new, brick, one-story and basement building of 20,000 square feet, sprinklers, with a life expectancy of 50 years, would cost about $9,000. Insurance to 80 per cent of the library's $375,000 value would cost about $725 a year without sprinklers, $245 with.

Many Safeguards Available to Libraries

Until all libraries are sprinklered, they would do well to emulate the New York Public Library in adopting such other safeguards as these: Stepping up guard service in evening and early morning hours, installing more extinguishers in strategic locations, restricting use of book stacks, doing a thorough "housekeeping" job to eliminate possible fire sources, and considering smoke detection and alarm devices.

There also are carbon dioxide extinguishing

New York Fire Department

The 10,000 firemen and 2,500 officers of New York Fire Department use this library, in Fire College and after, to further careers and fire fighting knowledge. Believed to be the world's largest collection of fire service literature, it has more than 12,000 books and documents on fire fighting, fire prevention, administration, historical fires, fire codes, laws.

No Book-Burning Here

systems for enclosed rooms, fire-resistant card catalogs and reference files, and other safeguards available. The National Fire Protection Association has prepared a brochure on library fire protection methods. The American Library Association's library insurance committee urges following the advice of an insurance authority.

Communities which have lost their libraries can testify to the need for following such advice. For example, sprinklers no doubt could have saved the 122,000 books, historical Illinois documents and letters of Lincoln that were destroyed in a $650,000 fire at the Galesburg, Illinois, Public Library in 1958. Insurance could not have saved them, but it could provide funds to replace all but the irreplaceable papers.

Galesburg is only one recent victim of the hazard that has belied the books-don't-burn adage throughout history. Hundreds of other libraries also have suffered disastrous fires. One was the Library of Congress, which was virtually destroyed three times in its first 51 years.

Such losses must make Benjamin Franklin, founder of America's circulating library system, turn over in his grave. For Franklin was not only a book lover, writer and publisher, but a pioneer in fire prevention and the father of mutual insurance, which is based on prevention of losses. That the Library Company of Philadelphia, which he started in 1731, is still in business today says much for his foresightedness.

The love of books and learning that motivated Franklin in those early years has been part of the American heritage ever since. In 1804 settlers along the Ohio River were bartering coonskins for books in the "Coonskin Library" in Marietta, Ohio. Carpenters, merchants, apprentices, other groups got together and established libraries. By 1820 the states were doing the same.

The first local public library in America is considered to be the one founded in Peterborough, New Hampshire, in 1833, although town tax money had supported the privately-donated library of Salisbury, Connecticut, since 1803. Public libraries got their biggest single boost in 1901, when Andrew Carnegie began giving his millions to libraries and other causes. Like Franklin, whom he greatly admired, Carnegie had been a poor youth and owed much of his education to books.

Libraries Serve Sailors and the Sightless

Today, as the U. S. observes National Library Week (April 3-9), there are libraries almost everywhere—even afloat. On the Empire State III, training ship of the State University of New York Maritime College, the 10-by-13-foot ship's library serves 300 young men each year. And at the Free Library of Philadelphia, the world's largest and finest collection of Braille and "talking books" brings literature and light even to those who cannot see to read.

But with 25 million rural Americans still without public library service, and most of the world crying for reading material, it is unthinkable that books should burn in preventable library fires. If all library administrators, like those in New York, will heed the advice of fire protection and insurance authorities on the proper safeguards, December's deliberate book-burning could have been our last. ⊙

John J. Holmes, Montana insurance commissioner since 1933 and recent Zone 6 NAIC executive committee member.

HOLMES OF MONTANA

NATIONAL INTEREST is turning to Montana, where 60 glaciers and 200 lakes await a record flow of vacationers in this golden anniversary year of Glacier National Park.

For added attraction, the state still has its age-old "richest hill on earth" — Butte's silver and copper mines — plus something new and modern. The newest Montana pride is a complete recodification of insurance laws—the largest piece of legislation ever passed in the 41st state.

This modern insurance code—Montana House Bill No. 29—was signed into law by Governor J. Hugo Aronson last year and will become effective January 1, 1961. Enactment of it highlights advances in Montana's insurance industry, as reported by John J. Holmes, state auditor and insurance commissioner since 1933.

During Commissioner Holmes' first year in office, total insurance taxes and fees collected by his department amounted to $300,000. Currently, the total is running in excess of $2 million annually. In 1933, Holmes' staff issued licenses to 327 insurance companies and some 7,000 agents. Now, twice that many agents are licensed in Montana, along with 200 additional companies. State property-casualty insurance premiums alone have climbed to around the $65 million-a-year mark.

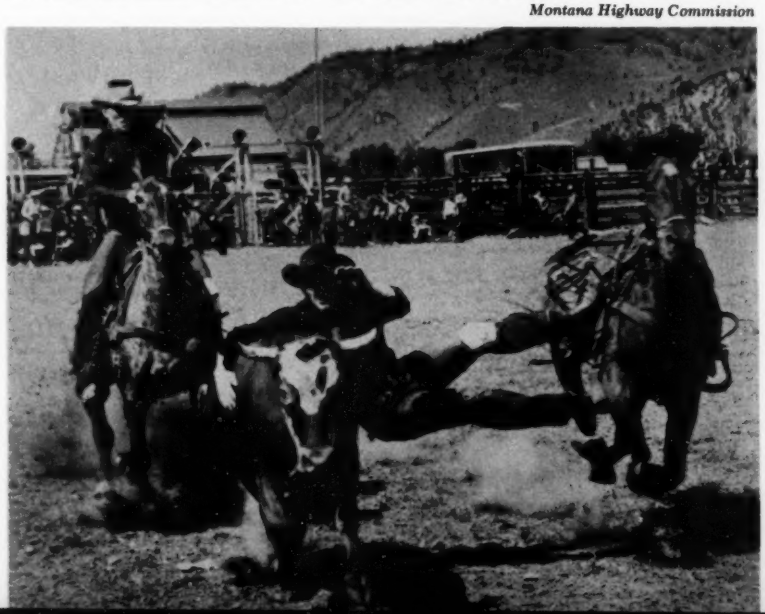
Insurance in Montana serves a hardy array of rangeland industries as well as a $93 million-a-year tourist business. Annual value of production and income from 67 million acres of ranches and farms is a half billion dollars. Nearly 2½ million cattle, 1½ million sheep, and wheat, hay, barley, and sugar beets are among Montana's agricultural bounty.

Mining and timber are major Montana enterprises, worth about $300 million in annual production. The state furnished the Christmas trees for 4 million American homes last year. Copper ($48 million) and oil ($77 million) were the leaders of the mineral industry. With one of the richest hydroelectric potentials in the world, the state's basic industries are nurturing a growing manufacturing complex which annually turns out products valued at $250 million.

Active on Montana's industrial scene since 1907, Commissioner Holmes has been associated with the state's insurance industry since shortly after World War I. He is state fire marshal as well as auditor and insurance commissioner, and has served on the industrial accident board, the state board of pardons, state library board and depository board.

Born in Ireland, Holmes was a boyhood friend of Father Flanagan of Boys Town fame, and has assisted officials of that organization for many years. He was an early leader of the March of Dimes polio drives in his state. A past state president of the Eagles, Holmes is also a member of the Elks, Knights of Columbus, Hibernians, American Legion, Veterans of Foreign Wars and is an honorary Blue Goose. ⊙

Annual rodeos in virtually every Montana town are profitable by-product of beef industry, spark $93 million tourist trade. State hosts 1960 Governors' Conference in June.
Montana Highway Commission



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